



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/849,183

05/20/2004

Akiko Kusumoto

1095.1310

7251

21171 7590 08/29/2008

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

DAGLAWI, AMAR A

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

08/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/849,183	Applicant(s) KUSUMOTO ET AL.	
	Examiner Amar Daglawi	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9, 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/11/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claims 4 and 10 are cancelled and Claims 1, 5, 9 and 11 are amended. Claims 1-3, 5-9 and 11 are pending. The Amendment has been entered.

Response to Arguments

1. Applicant's arguments filed 05/05/2008 have been fully considered but they are not persuasive. With respect to independent claims 1, 9, and 11, Applicant argues that neither Suh (US 6,798,950) nor Hirabayashi (US 5,666,154) teach the claimed limitation of "a wireless communication state judging means for judging a state of wireless communication with the master station on the basis of a receive level of a predetermined signal transmitted from the master station". The Examiner respectfully disagrees. According to MPEP 2111, the examiner is to give the claims the broadest reasonable interpretation consistent with the specification without reading limitations from the specification into the claims. Thus, upon given the broadest reasonable interpretation, Suh (US 6,798,950) teaches the first control means evaluates the state of the communication network whether it is good and based on the state of the communication network it will encode the input data as QCIF (quarter common intermediate format) if the network status indicates that there is very little traffic as a result of a communication network status check. The evaluation of the status of the network is well know in the art in which the base station (part of the communication network 10) transmits and receives control signals to check the status of the communication network which is apparent from Fig.1. All cell phones have special

codes associated with them. When powering up the phone, it listens for a system identification code on the control channel. The control channel is a special frequency that the phone and the base station use to talk to one another about things like setting up and channel changing. When it receives the system identification code, the phone compares it to the system identification code programmed into the phone. If the system identification codes match, the phone knows that the cell it is communicating with is part of its home system. Thus, a typical mobile is constantly connected to a base station when it is powered on and **listens** for a system identification code thus judging the state of wireless communication with the base station based on the system identification code on the control channel.

2. Furthermore, Applicant argues with respect to claim 8 that neither of the cited references teaches "determining quality of images to be encoded in accordance with the processing load of wireless communication" and that Nakamura (US 2002/0118756 A1) fails to teach or suggest "processing load measurement means for measuring processing load imposed on said wireless communication means" and "image quality decision means for determining quality of image to be encoded by said image encoding unit in accordance with the processing load measurement by said processing load measurement means". The Examiner believes that the target frame rate is an image quality characteristic in which if the frames are transmitted at a slow rate, the result is a poor quality. The current load of the CPU and the value of the target frame rate are two interrelated characteristics. [see par [0054-0055]].

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 recites the limitation "the image encoding unit" in line 12. There is insufficient antecedent basis for this limitation in the claim.

5.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 5-7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suh et al (US 6,798,915 B2) in view of Hirabayashi (US 5,666,154).

With respect to claim 1, Suh discloses A wireless communication device for performing wireless communication with a master station (Fig.1), comprising:

an image encoding unit (Fig.1, #12) for encoding image acquired by a camera to obtain image data of instructed quality (Abstract, fig.1, col.3, lines 1-27);

wireless communication means for transmitting, by wireless, the image encoded by said image encoding unit to the master station on the basis of a receive level of a predetermined signal transmitted from the master station (Fig.1, col.3, lines 1-27, col.1, 19-26); [see arguments above]

wireless communication state judging (Fig.1, #13) means for judging a state of the wireless communication with the master station (col.3, lines 1-27, fig.3, col.5, lines 5-35) [A master station is part of any network];

image quality decision means (Fig.1, #13) for determining quality of image to be encoded by said image encoding unit, in accordance with the wireless communication state (col.5, lines 5-35); and image quality instruction means (Fig.1, #13) for instructing said image encoding unit to encode the image with the quality determined by said

image quality decision means (Abstract, col.3, lines 5-67, col.4, lines 1-25, Fig.1, Fig.2, col.2, lines 25-50).

However, Suh fails to explicitly teach image acquired by a camera which is taught in the same field of endeavor by Hirabayahi (See Fig.2, col.2, lines 25-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Suh (the apparatus in fig.1) to incorporate a camera 17 as taught by Hirabayashi so as to input images into the apparatus.

With respect to claim 4, Suh as modified by Hirabayahi further teaches the wireless communication state judging means judges the wireless communication state on the basis of a receive level of a predetermined signal transmitted from the master station (Suh, col.3, lines 5-67, col.4, lines 1-25) [The base station (master station) periodically broadcasts one beacon signal per second to identify a wireless subscriber in a given area and the mobiles continue to listen for a new beacon].

With respect to claim 5, Suh as modified by Hirabayahi further teaches the predetermined signal is a beacon signal (Suh, col.3, lines 5-67, col.4, lines 1-25) [The base station (master station) periodically broadcasts one beacon signal per second to identify a wireless subscriber in a given area and the mobiles continue to listen for a new beacon].

With respect to claim 6, Suh as modified by Hirabayahi further teaches said image quality decision means predicts a future communication state on the basis of the

wireless communication state and determines the image quality in accordance with the predicted communication state (Suh, col.3, lines 5-67, col.4, lines 1-25) [The base station (master station) periodically broadcasts one beacon signal per second to identify a wireless subscriber in a given area and the mobiles continue to listen for a new beacons].

With respect to claim 7, Suh as modified by Hirabayahi further teaches said wireless communication state judging means detects error of a predetermined signal transmitted from the master station and judges the wireless communication state on the basis of occurrence of the error (Suh, col.3, lines 5-67, col.4, lines 1-25) [The base station (master station) periodically broadcasts one beacon signal per second to identify a wireless subscriber in a given area and the mobiles continue to listen for a new beacon. An error occurs when a mobile fails to be identified].

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suh in view of Hirabayashi as applied to claims 1 above, and further in view of Nakamura et al (US 2002/0118756 A1).

With respect to claim 2, Suh in view of Hirabayashi teaches all the limitation of claim 1 except for a processing load measurement means for measuring processing load imposed on said wireless communication means wherein said image quality decision means determines quality of image to be encoded by said image encoding unit in accordance with the processing load on said wireless communication means and the

wireless communication state which taught in the same field of endeavor by Nakamura et al (US 2002/0118756 A1) (See par [0050;0056], Fig.5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Suh in view of Hirabayahi (the apparatus) to incorporate the CPU load detection module (601) as taught by Nakamura so as to detect the current load of the CPU 11 on the basis of time required for the compression coding processing.

With respect to claim 3, Suh in view of Hirabayahi and further in view of Nakamura further teach said image quality decision means determines an image quality with higher data compression ratio, out of an image quality matching the processing load on said wireless communication means and an image quality matching the wireless communication state, as the quality of image to be encoded by said image encoding unit (Nakamura par [0050; 0056]).

With respect to claim 9, Suh discloses a wireless communication method for performing wireless communication with a master station comprising:

Judging a state of the wireless communication with the master station on the basis of a receive level of a predetermined signal transmitted from the master station (col.3, lines 1-27, fig.3, col.5, lines 5-35, Fig.1, #13) [A master station is part of any network]. [see arguments above].

Determining quality of image to be encoded, in accordance with the wireless communication state that is judged (col.5, lines 5-35, fig.1, #13);

encoding image acquired by a camera to obtain image data of the determined quality (Abstract, Fig.1, col.3, lines 1-27) (Abstract, col.3, lines 5-67, col.4, lines 1-25, fig.1, fig.2, col.2,,lines 25-50); and transmitting the image encoded by the image encoding unit to the master station by wireless (Fig.1, col.3, lines 1-27, fig.3, col.1, lines 19-26).

However, Suh fails to explicitly teach image acquired by a camera which is taught in the same field of endeavor by Hirabayahi (See Fig.2, col.2, lines 25-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Suh (the apparatus in fig.1) to incorporate a camera 17 as taught by Hirabayashi so as to input images into the apparatus.

With respect to claim 11, Suh discloses wireless communication means for transmitting image encoded by an image encoding unit which encodes image acquired by a camera to obtain image data of instructed quality, to the master station by wireless (Fig.1, col.3, lines 1-27, col.1, lines 19-26) [a master station is part of any network]; wireless communication state judging means (Fig.1, #13) for judging a state of the wireless communication with the master station (col.3, lines 1-27, Fig.3, col.5, lines 5-35]; Image quality decision means (Fig.1, #13) for determining quality of image to be encoded by the image encoding unit in accordance with the wireless communication state (col.5, lines 5-35);

Image quality instruction means for instructing the image encoding unit to encode the image with the quality determined by the image quality decision means (Abstract, col.3, lines 5-67, col.4, lines 1-25, fig.1, fig.2, col.2, lines 25-50).

However, Suh fails to explicitly teach image acquired by a camera which is taught in the same field of endeavor by Hirabayashi (See Fig.2, col.2, lines 25-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Suh (the apparatus in fig.1) to incorporate a camera 17 as taught by Hirabayashi so as to input images into the apparatus.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suh et al (US 6,798,915 B2) in view of Nakamura et al (US 2002/0118756 A1) and further in view of Hirabayashi (US 5,666,154).

Suh discloses A wireless communication device for performing wireless communication with a master station, comprising:

an image encoding unit (Fig.1, #12) for encoding image acquired by a camera to obtain image data of instructed quality (Abstract, fig.1, col.3, lines 1-27);

wireless communication means for transmitting, by wireless, the image encoded by said image encoding unit to the master station (Fig.1, col.3, lines 1-27, col.1, lines 19-26) [the master station is part of any network];

However, Suh fails to expressly teach processing load measurement means for measuring processing load imposed on said wireless communication means; image quality decision means for determining quality of image to be encoded by said image encoding unit, in accordance with the processing load measured by said processing load measurement means; and image quality instruction means for instructing said image encoding unit to encode the image with the quality determined by said image quality decision means which is taught in the same field of endeavor by Nakamura (Fig.5, See par [0050;0059].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Suh (the apparatus) to incorporate the CPU load detection module (601) as taught by Nakamura so as to detect the current load of the CPU 11 on the basis of time required for the compression coding processing. Also, Suh in view of Nakamura fails to explicitly teach image acquired by a camera which is taught in the same field of endeavor by Hirabayashi (See Fig.2, col.2, lines 25-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Suh in view of Nakamura (the apparatus in fig.1) to incorporate a camera 17 as taught by Hirabayashi so as to input images into the apparatus.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amar Daglawi whose telephone number is 571-270-1221. The examiner can normally be reached on Monday- Friday (7:30 AM- 5:00 AM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan can be reached on 571-272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amar Daglawi/
Examiner, Art Unit 2618

/Yuwen Pan/
Primary Examiner, Art Unit 2618